Feasibility of Achieving or Approaching Background Policy
Summary of Public Review Comments

Section	Comment	Commenter	Response
General	Question the authority of the DEP under 21E or MCP to require a PRP to evaluate and undertake response actions to approach background (i.e., "a little better than NSR but not background").	LSPA	See definitions of the feasibility of achieving or approaching background in 21E statute (Section 3A (g)-"*reduce to the extent possible*" and MCP (40.0852(4))).
9.3.1	Clarify that the 20 cy is 20 extra cubic yards of soil or less to avoid confusion with conditions addressed as an LRA, which is not subject to the FAAB requirements.	LSPA	This policy applies to sites that have undertaken response actions to achieve NSR.
9.3.1	Require that remediation be conducted for common toxic contaminants in addition to petroleum (<= 20 cubic yards in S-1) as conditions of categorical feasibility	Jeffrey Barnes, Handex	Disposal costs are significant for hazardous materials and may not outweigh benefits of removal in all circumstances. Disposal costs for hazardous materials are also variable and depend on specific contaminant(s). Therefore, hazardous materials should be addressed under site-specific evaluation.
9.3.2.1	Clarify whether the condition of categorical infeasibility for excavation under permanent structures would apply to an industrial floor beneath a permanent structure	Al Snyder, Environmental Resources Associates	A condition of categorical infeasibility would exist if the integrity of the structure would be impaired.
9.3.2.1	Allow a sealed letter from a Massachusetts Registered Professional Civil or Structural Engineer in lieu of PE certification. This affects liability insurance. PE licensing regulations would require the individual sealing the letter to be qualified to make opinion.	Ilene Gladstone, GEI	Text will be clarified to state that where appropriate, an evaluation from a Massachusetts Registered Professional Engineer would be necessary for conditions where additional remedial actions to achieve or approach background would threaten the integrity of the permanent structure.
9.3.2.1	Massachusetts Registered Professional Civil Engineers are also qualified to render opinions on structural integrity of permanent structures.	Ilene Gladstone, GEI; Ray Leather, Dunn McKenzie; Ambrose Donovan, McPhail; LSPA	The text will be revised to state that a Massachusetts Registered Professional Engineer is acceptable.

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9.3.2.2	There are several subjective terms in this section that may need definitions. Examples include "large number of customers", "unreasonable traffic delays or congestion", "reasonably possible".	LSPA	Professional judgment should be used when evaluating whether remedial actions would substantially interrupt public service or threaten public safety.
9.3.2.3	Criteria for listing contaminants on Table 9-1 should be established and a mechanism for adding to the list should be established in the policy.	LSPA	The policy references the MCP for the list of contaminants in Tables 9-1 and 9-2. The process for updating this list would be done through changes to the MCP.
9.3.2.3	Clarify whether nonpersistent contaminants can be eliminated from the FAAB evaluation for a site that has additional contaminants.	LSPA	The text will be clarified to state nonpersistent (degradable) contaminants can be eliminated from the background feasibility evaluation for a site that has persistent contaminants.
9.3.2.3	Clarify text in policy to clearly state the definition of infeasibility in the context of nonpersistent (degradable) compounds in soil or groundwater.	Maureen Vallentini, OGC	The text will be clarified to state that the benefits of additional remedial actions to achieve or approach background in cases where contaminants are likely to degrade in a reasonable timeframe is considered insufficient to justify the costs of those actions (i.e., infeasible).
9.3.2.3	Does policy apply to GW-1, GW-2, and GW-3 groundwater or soils where groundwater in these categories is present.	LSPA; Maureen Vallentini, OGC	The text will be clarified to state that soil and groundwater should be evaluated separately. Persistent compounds at S-1 sites and/or GW-1, GW-2, and GW-3 sites would require an evaluation under this policy. (i.e., if site contains persistent compounds in an S-2/GW-1 area, evaluation required only for groundwater).
9.3.2.3	Please clarify how metals (e.g., nickel) that are not specifically listed in Tables 9-1 and 9-2 would be addressed.	Al Snyder, Environmental Resources Associates	Text currently states that two options exist. Either consider contaminant as persistent and conduct evaluation with presumptive certainty or use other means to conduction evaluation.
9.3.2.3	Recommend adding VPH fractions and EPH fractions to List of Degradable (Nonpersistent) Contaminants on Table 9-1.	Ray Leather, Dunn McKenzie	For simplicity, petroleum will continue to be listed as Petroleum Hydrocarbons except No. 6 Fuel Oil on degradable list and No. 6 Fuel Oil on persistent list since individual EPH fraction ranges overlap (e.g., No. 6 fuel oil), and therefore it is difficult to distinguish between EPH fractions.

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9.3.3.2	Clarify what is meant by a "point of diminishing return below No Significant Risk." How does the off-gas influent stream relate to soil contaminant concentrations? Is the point of diminishing return the point at which off-gas controls can be removed or discontinued altogether?	Ray Leather, Dunn McKenzie	This "treatment curve" criterion is one of four criteria that can be used to demonstrate that background has been approached.
9.3.3.2	Include all groundwater extraction systems to the definition of approaching background for "groundwater pump and treat systems".	Ray Leather, Dunn McKenzie	Change text to include all groundwater/NAPL extraction and treatment systems.
9.3.3.2	Are Method 3 Risk Characterizations presently addressed in the policy?	Ray Leather, Dunn McKenzie	Yes, the proposed criteria (e.g., all points less than S-1 standards) for approaching background apply to sites using Method 3 Risk Characterizations.
9.3.3.2	Policy needs to address how closed sites will be evaluated when soil and groundwater are sampled as due diligence for real estate transfers.	Ray Leather, Dunn McKenzie	Not relevant for discussion in this policy. Adequacy of site closure is based on standards and requirements in place at the time the RAO is filed. This policy describes a statutory requirement that has not changed.
9.3.3.2	Clarify whether 50 percent mass reduction is based on initial site conditions or at the time NSR is reached.	LSPA; Jeffrey Barnes, Handex	The text will be clarified to state that EPC and Mass reduction criteria are based on EPC and mass present at NSR.
9.3.3.2	Confirm whether all background feasibility requirements would be met when approaching background is met at the time NSR is achieved.	Jeffrey Barnes, Handex	The background feasibility requirements would be met assuming evaluation of achieving background was conducted.

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9.3.3.2	Asbestos is listed on Table 9-2 as a persistent compound but does not seem to fit any of the proposed criteria (no S-1 standard, etc.)	LSPA	A footnote will be added on Table 9-2 to state that the criteria in this policy to evaluate the feasibility of achieving or approaching background are not applicable to asbestos. Additional information can be found in DEP's Asbestos in Soil Policy.
9.3.3.2	Clarify text regarding soil criteria for approaching background to specify that only one of the four criteria must be satisfied.	LSPA; Al Snyder, Environmental Resources Associates	The word "or" will be inserted after each criterion.
9.3.3.2	For a site with multiple metals, please clarify whether it is sufficient to document that the cost to achieve/approach background for only one metal exceeds 20% of the cost to achieve NSR for the entire site rather than repeat evaluation for all contaminants.	Al Snyder, Environmental Resources Associates	If multiple metals are co-located at a site and it is documented that it not feasible to achieve or approach background for any one of the metals present, then there is no need to evaluate the remaining co-located metals. The text will be clarified.
9.3.3.2	Clarify for a soil or groundwater treatment system that the point of inflection needs to be below NSR.	LSPA	This statement is already included in Section 9.3.3.2 of the policy.
9.3.3.2	A criterion for approaching background using a remediation technology that does not directly result in the measurement of contamination in that media of concern should not be included. In addition, the background evaluation would be done during Phase III, so the determination of the point of diminishing return would need to be based on a theoretical calculation, probably bearing little resemblance to what happens in the field.	LSPA	The "treatment curve" criterion is only one of four possible criteria acceptable for the evaluation. Asymptotic conditions is a measure of "the extent feasible" and not a measure of absolute conditions. For the purposes of Phase III evaluations, the use of background as a goal is not procedurally different from using risk standards as a goal. Adequate data should be collected for site characterization and feasibility evaluation to achieve remediation goal regardless of whether goal is NSR or background. Collection of additional data during remediation may be necessary for either case.

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9.3.3.2	Soil criteria for defining approaching background may be impractical to achieve or require clarification. There will not be enough data during Phase III if Method 1 S-1 standards are used. For inflection point criterion, evaluating during Phase III will require the use of highly unreliable predictive modeling and additional operating cost. For 50% reduction in mass and EPC criteria, this would require an extraordinary amount of site characterization data.	LSPA	See Comment and Response above. It is noted that this policy will be useful for most sites, but there will always be unique conditions that are better addressed using a site-specific approach.
9.3.3.4	The components of the cost to remediate to NSR need to be defined. It is recommended that this cost include the execution of the response action, including treatment system installation and operation or contamination removal, treatment or disposal costs, and LSP services to provide oversight.	LSPA	The text will be revised to state that the costs to achieve NSR should include all costs incurred during and after the implementation of the remedial actions, including site assessment costs.
9.3.3.4	Provide additional information and examples about remobilization costs. These costs could be significant and impact the outcome of the feasibility evaluation (e.g., if system needs extensive repair or if system has been partially or fully dismantled prior to reaching NSR).	Jeffrey Barnes, Handex	The text will be revised to include upgrade and maintenance costs in the evaluation of costs to remediate from NSR to achieve or approach background.
9.3.3.4	The Inclusion of remobilization costs should be allowed in the background feasibility evaluations for IRA and RAMs that achieve NSR since there may not be sufficient data to consider feasibility of achieving/approaching background at the outset of the process.	LSPA	Remobilization costs will not be allowed for any remedial actions.